

BROADBAND SURGE PROTECTION DEVICE WITH NON-RESETTING CURRENT LIMITER

ABSTRACT OF THE DISCLOSURE

A surge protection device includes a gas discharge tube surge protector
5 connected between a Tip line and a Ring line, and further includes solid state heat-
generating resistive elements in the Tip and Ring lines, and thermally-responsive
sneak current grounding switches in the Tip and Ring lines that have an untripped
position connecting Tip and Ring line terminals of the surge protector respectively to
the Tip and Ring line resistive elements, and a tripped position in which they ground
10 the Tip and Ring line terminals. The switches are switched to their tripped position
in response to the heat generated in the resistive elements as a consequence of current
passing through them that exceeds a predetermined current level. A surge
suppression element is connected in parallel with each of the resistive elements. The
resistive elements are preferably carbon film resistors, and the surge suppression
15 elements are preferably transient voltage suppression diodes.